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The Loss Causation Requirement for Rule 10b-5 Causes of Action: The Implications of *Dura Pharmaceuticals, Inc. v. Broudo*

By Allen Ferrell and Atanu Saha*

In order to have recoverable damages in a Rule 10b-5 action, plaintiffs must establish loss causation, i.e., that the actionable misconduct was the cause of economic losses to the plaintiffs. The requirement of loss causation has come to the fore as a result of the U.S. Supreme Court's landmark decision in Dura Pharmaceuticals, Inc. v. Broudo. We address in this Article a number of loss causation issues in light of Dura, including the proper use of event studies to establish recoverable damages, the requirement that there be a corrective disclosure, what types of disclosure should count as a corrective disclosure, post-corrective disclosure stock price movements, the distinction between the class period and the damage period, collateral damage caused by a corrective disclosure, and forward-casting estimates of recoverable damages.

I. INTRODUCTION: THE REQUIREMENT OF LOSS CAUSATION

In a Rule 10b-5 cause of action, plaintiffs have the burden of pleading and proving that the actionable misconduct, such as a reckless or intentional material misrepresentation upon which they relied, was responsible causally for damaging their shares. The requirement of establishing so-called “loss causation” has long been part of the common law.¹ It was at the very start of the development of Rule 10b-5 jurisprudence in *Schlick v. Penn-Dixie Cement Corp.* that a federal circuit court first mentioned the requirement of “loss causation” in a Rule 10b-5 action.² The requirement of loss causation for Rule 10b-5 causes of action was

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1. See *Pasley v. Freeman*, (1789) 100 Eng. Rep. 450, 457 (K.B.) (finding that if “no injury is occasioned by the lie, it is not actionable”); see also *Dura Pharms., Inc. v. Broudo*, 544 U.S. 336, 344 (2005) (discussing how “loss causation” is a requirement in common law deceit and misrepresentation actions).

2. 507 F.2d 374, 380–82 (1974), *cert denied*, 421 U.S. 976 (1975).

codified in the Private Securities Litigation Reform Act of 1995, which requires plaintiffs to “prov[e] that the act or omission of the defendant alleged to violate [section 10(b)] caused the loss for which the plaintiff seeks to recover damages.”³ The requirement of loss causation has become increasingly emphasized by federal circuit courts, especially in light of the U.S. Supreme Court’s recent landmark decision on loss causation in *Dura Pharmaceuticals, Inc. v. Broudo*.⁴ Perhaps the most notable decision in this regard is the U.S. Court of Appeals for the Fifth Circuit’s recent opinion in *Oscar Private Equity Investments v. Allegiance Telecom, Inc.*⁵ The court held that loss causation must be established before class-wide reliance can be presumed under a fraud-on-the-market theory at the class certification stage.⁶

The Supreme Court’s decision in *Dura* provided some much-needed clarification on what constitutes “loss causation.” In that case, the defendant Dura Pharmaceuticals was alleged to have stated falsely on April 15, 1997 that it was likely to receive U.S. Food and Drug Administration (“FDA”) approval of an asthmatic spray device.⁷ On February 24, 1998, Dura Pharmaceuticals lowered its earnings forecast citing slow drug sales.⁸ Finally, on November 4, 1998, Dura Pharmaceuticals announced the FDA’s denial of its asthmatic spray device.⁹ Plaintiffs sued Dura Pharmaceuticals under Rule 10b-5 with the class period running from April 15, 1997—the date of the alleged misrepresentation concerning the likelihood of approval—to February 24, 1998—the date of the lowered forecast being disseminated to the market.¹⁰ Dura’s stock price over that time period is summarized in Figure 1.¹¹

There are two aspects of the Court’s analysis of plaintiffs’ Rule 10b-5 action that are particularly noteworthy. First, the Court held that even if Dura Pharmaceuticals’ stock price was artificially inflated as a result of a fraudulent statement concerning the expectation of FDA approval of Dura’s asthmatic inhaler, that was nevertheless insufficient to establish loss causation.¹² In so doing, the Court rejected the position of the U.S. Court of Appeals for the Ninth Circuit that merely pleading price inflation was sufficient to state a claim under Rule 10b-5.¹³ Second, and equally important, the Court explained that the mere fact that Dura Pharmaceuticals’ shareholders who purchased after Dura had made the purportedly false statement

3. See Private Securities Litigation Reform Act of 1995, Pub. L. No. 104-67, § 101(b), 109 Stat. 737, 747 (codified at 15 U.S.C. § 78u-4(b)(4) (2000)) [hereinafter “PSLRA”]; see also PSLRA, § 105, 109 Stat. at 757 (codified at 15 U.S.C. § 771(b) (2000)) (stating that loss causation means the “depreciation in value of the subject security” caused by the misrepresentation); PSLRA, § 101(b), 109 Stat. at 748–49 (codified at 15 U.S.C. § 78u-4(e) (2000)) (limiting Rule 10b-5 recovery based on stock price movements following disclosure of “the misstatement or omission that is the basis for the action”).

4. 544 U.S. 336.

5. 487 F.3d 261 (5th Cir. 2007).

6. *Id.* at 268–69.

7. See Respondents’ Brief at 1a, *Dura Pharms., Inc. v. Broudo*, 544 U.S. 336 (2005) (No. 03-932).

8. *Id.* at 4.

9. See *id.* at 1a.

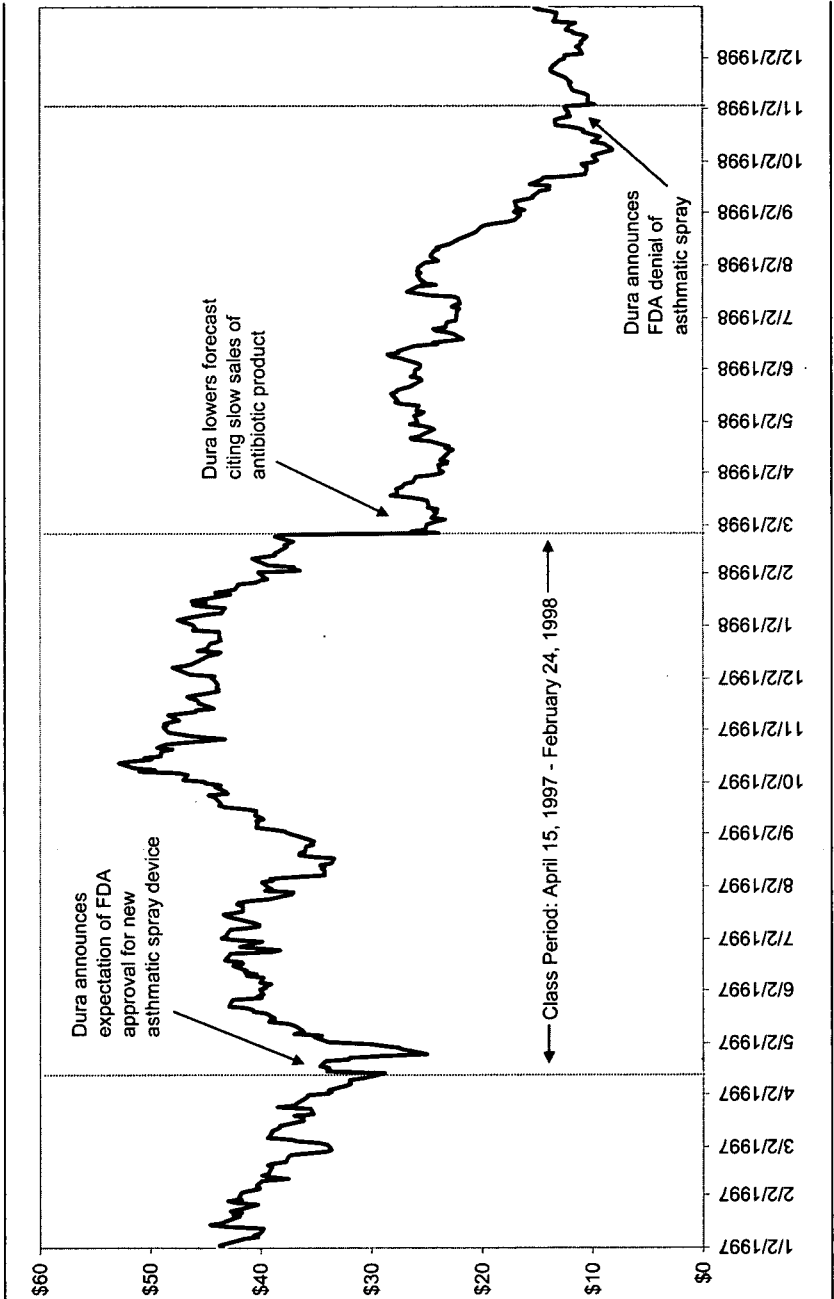
10. *Dura Pharms., Inc.*, 544 U.S. at 339.

11. See Respondents’ Brief at 1a, *Dura Pharms., Inc. v. Broudo*, 544 U.S. 336 (2005) (No. 03-932).

12. *Dura Pharms., Inc.*, 544 U.S. at 342–46.

13. See *id.* at 342–47.

Figure 1
Dura Pharmaceutical Share Prices: 1997-1998



to the market, and hence arguably purchased at an inflated price, suffered a decline in the value of their stock between the time of purchase and the time of sale was likewise insufficient to establish loss causation.¹⁴ That conclusion was based on the observation that any number of factors could have caused shareholders' economic losses besides revelation of the misrepresentation (a so-called "corrective disclosure"), such as changing industry or market conditions.¹⁵

In short, the Supreme Court in *Dura* emphasized that the actionable misconduct must *cause* economic losses to shareholders who purchased shares at an inflated price. The method to calculate the portion (if any) of shareholders' losses attributable to the inflation caused by actionable misconduct raises a number of important issues. We begin by first outlining the basic analytical framework used in thinking about loss causation (as well as the related issue of materiality)—the event study—and then discuss several practically important damage issues that frequently come up in Rule 10b-5 securities litigation: the requirement that there be a "corrective disclosure"; what exactly constitutes a "corrective disclosure"; post-"corrective disclosure" stock market price movements; the allocation of inflation to different shares; collateral damage caused by revelation of the actionable misconduct; and back-casting versus forward-casting estimates of damages.

II. ANALYTICAL FRAMEWORK FOR EVENT STUDY ANALYSIS

Event study analysis is a ubiquitous tool in assessing claims of loss causation as well as the "materiality" of misstatements or fraudulently omitted information.¹⁶ An event study is a regression analysis that measures the effect of an event, such as a firm's earnings announcement, on a firm's stock price.¹⁷ In such an analysis, one must, of course, control for factors other than the event that may also simultaneously affect the stock price.¹⁸

A typical econometric model for measuring the effect of an alleged misrepresentation or a corrective disclosure on stock price is:

$$r_t = \ln \left(\frac{p_t}{p_{t-1}} \right) = \beta_0 + \beta_1 M_t + \beta_2 I_t + \sum_{i=1}^k \alpha_i D_i + \varepsilon_t$$

where r is the daily return (i.e., logarithmic percent change) of the stock price, M is the return on a market index, such as the S&P 500 Index or the Dow Jones Index, I is the return on an industry index (e.g., S&P Telecom Index), and the t subscript denotes the t^{th} day. $D_1 \dots D_k$ are k day-dummy variables—that is, they are binary

14. *Id.* at 342–46.

15. *Id.* at 343.

16. See, e.g., Jonathan R. Macey, Geoffrey P. Miller, Mark L. Mitchell & Jeffrey M. Netter, *Lessons from Financial Economics: Materiality, Reliance, and Extending the Reach of Basic v. Levinson*, 77 VA. L. REV. 1017, 1028–42 (1991).

17. See generally JOHN Y. CAMPBELL, ANDREW W. LO & A. CRAIG MACKINLAY, *THE ECONOMETRICS OF FINANCIAL MARKETS* 149–80 (1997).

18. Macey et al., *supra* note 16, at 1032, 1036–37.

variables, each taking the value of one for the day at issue and a value of zero for all other days.¹⁹ These days may be the days of the alleged misrepresentations or days of the corrective disclosures.

The estimated coefficient of the i -th day dummy, $\hat{\alpha}_i$, is a measure of the market and industry-adjusted return, in short the “abnormal return” on the i -th day.²⁰ The t -statistics for $\hat{\alpha}_i$ provide statistical evidence on whether the price move on the i -th day, after controlling for market and industry factors, is explained by random chance or by firm-specific news. A sufficiently large value of the t -statistics (generally greater than 1.96 in absolute value for a 95% level of confidence) allows the investigator to conclude that the estimated abnormal return on the i -th day cannot be explained by chance alone and is therefore attributable to firm-specific news.²¹ Thus, this analytical framework has obvious implications for both loss causation and materiality.

There are a number of important generic issues that must be considered in undertaking a rigorous event study analysis: proper choice of an industry index; the length of the “event-window”; the possible “trickling” out to the market of the fact that there had been a misrepresentation; and confounding events.

1. PROPER CHOICE OF AN INDUSTRY INDEX

In selecting an appropriate industry index, it is important to pay particular attention to which firms are truly “comparable” in terms of their line of business and hence should be included in the industry index. The magnitude and the statistical significance of the $\hat{\alpha}_i$ -s (i.e., the size and significance of the abnormal returns) can be highly sensitive to the choice of the industry comparables. The information source for the selection of firms to be used as industry comparables can include the firm’s own financial filings (10-K, 10-Q), equity analysts’ reports, and the constituents of widely-used industry indexes, such as the Dow Jones Internet Index or the S&P Telecom Index.

2. THE LENGTH OF THE “EVENT WINDOW”

The $D_1 \dots D_k$ can be single-day dummy variables, or two-day or three-day or even five-day dummy variables. It often makes sense to use multiple-day dummy variables because of possible “overreaction” in the market to a corrective disclosure. There is a substantial finance literature documenting that, in some circumstances, there appears to be market “overreaction” to certain disclosures and that it might take the market some time to “digest” fully and accurately the implications of a correc-

19. See, e.g., Nihat Aktas, Eric de Bodt, Jean-Gabriel Cousin, *Event Studies with a Contaminated Estimation Period*, 13 J. CORP. FIN. 129–45 (2007).

20. This framework is analytically equivalent to estimating the model

$$r_t = \ln \left(\frac{P_t}{P_{t-1}} \right) = \beta_0 + \beta_1 M_t + \beta_2 I_t + \varepsilon_t$$

using all of the observations except the k -dummed days and the forecast for these k days.

21. See CAMPBELL ET AL., *supra* note 17, at 166.

tive disclosure, such as an accounting restatement.²² The market may correct for the “overreaction” over the course of several days, which would suggest the need to dummy out not only the day of the corrective disclosure but one or two days post-corrective disclosure as well. Alternatively, there can be “leakage” of news about the disclosure before the actual official corrective disclosure, suggesting, in some cases, the need to dummy the day or days prior to the actual corrective disclosure.

3. POST-DISCLOSURE “TRICKLE” EFFECT

Corrective disclosures can occur over a protracted period of time, i.e., the truth gradually “trickles” out into the market. As a result, while a single day’s abnormal return may not be significant, the cumulative effect on the firm’s stock over the entire corrective disclosure period may be. To examine such a hypothesis, one can test the significance of $\hat{\alpha}_1 + \dots + \hat{\alpha}_m$, assuming the disclosure period spans m days.

4. CONFOUNDING EVENTS

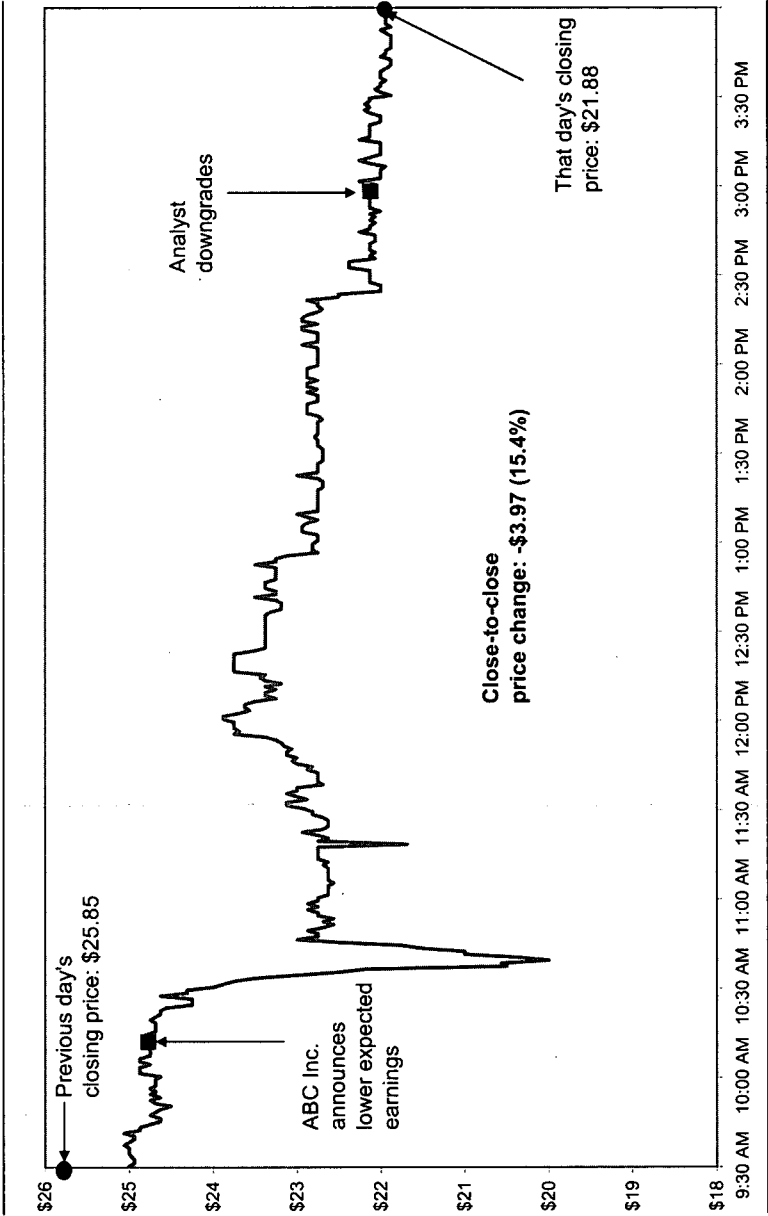
On a corrective disclosure day, there may be a disclosure event as well as firm-specific news unrelated to the alleged fraud. In that case, the estimated abnormal return on that day $\hat{\alpha}_i$, measures the combined effect of the disclosure and the unrelated firm-specific news. This confounding effect problem is exacerbated when using multi-day event windows as the longer the event window the more likely it is that confounding events occurred. Potential ways of dealing with this problem include (a) deletion of confounded days from the event study; and (b) the use of intra-day data.

Deletion of confounded days from the event study, while sometimes necessary, incurs the cost of removing potentially relevant information. The use of intra-day data can sometimes avoid this problem. In Figure 2 we illustrate the usage of intra-day data to disentangle the effects of two confounding events. The hypothetical data used in this figure is very similar to the actual NYSE TAQ data of a publicly traded firm; we call the firm ABC. Suppose in this litigation, the plaintiffs’ class alleged that an investment bank’s analyst artificially propped up the share prices of ABC by providing overly optimistic ratings and target prices. Also suppose the plaintiffs alleged that disclosure occurred over a series of days in which the analyst lowered the ratings of ABC. The share price movement on such a “disclosure” day, during which the analyst downgraded his recommendation of ABC, is depicted in Figure 2.

In this example, ABC’s prices moved down by 15.4%, falling from the previous day’s close of \$25.85 to \$21.88 on that day. Event study analysis, based on close-to-close price change, shows that day’s price drop to be statistically significant.

22. See generally, i.e., Georgina Benou & Nivine Richie, *The Reversal of Large Stock Price Declines: The Case of Large Firms*, 27 J. ECON. & FIN. 19 (2003); Navin Chopra, Josef Lakonishok & Jay R. Ritter, *Measuring Abnormal Performance: Do Stocks Overreact?*, 31 J. FIN. ECON. 235 (1992); Marc Bremer & Richard J. Sweeney, *The Reversal of Large Stock-Price Decreases*, 46 J. FIN. 747 (1991).

Figure 2
Intra-Day Share Prices of ABC Inc.



Thus, based purely on daily price change one may erroneously conclude that the analyst's downgrade had a statistically significant negative impact on ABC's share price.

However, examination of the intra-day data leads to a wholly different conclusion. As shown in Figure 2, the analyst did not downgrade ABC until 3:00 PM that day. At 10:15 AM on the very same day, ABC announced that it expected next quarter's and year's earnings to be lower. As is clear from the figure, the price reaction to that negative earnings news was sharp and immediate. By the time the analyst downgraded the stock later that afternoon, more than 14% of the total 15.4% price drop had already occurred. After the analyst's downgrade, ABC's prices moved by a statistically insignificant negative 1% for the rest of the trading day.

In this example, while the day's return is statistically significant, examination of the intra-day data allows one to disentangle the confounding effects of the two events, and conclude that the effect of the corrective disclosure was not significant. In contrast to the overreaction effect, consideration of confounding events emphasizes the advantage of using a shorter event window when possible. Thus, damages experts need to be judicious in choosing the length of the event window. In the end this decision may well turn on a balancing act between capturing the full-impact of the disclosure (allowing for the correction for overreaction) and avoiding the contamination of confounding events.

III. WHEN DOES A CORRECTIVE DISCLOSURE OCCUR?

1. THE REQUIREMENT THAT THERE BE A CORRECTIVE DISCLOSURE

The *Dura* court explained that the plaintiffs' failure to identify a fall in stock price "after the truth became known" to the market indicated a lack of loss causation.²³ The "truth" the Court is referring to is the revelation to the market of the actionable misconduct that forms the basis for the Rule 10b-5 cause of action.²⁴ For example, if an investor, who purchases at an inflated price because of a misrepresentation, "sells the shares quickly before the relevant truth begins to leak out, the misrepresentation will not have led to any loss."²⁵ The Court noted that a price decline does not result in recoverable damages if the decline is due to changes in "economic circumstances, changed investor expectations, new industry-specific or firm-specific facts, conditions, or other events . . ."²⁶ Some federal circuit courts have rightfully emphasized this language in *Dura* indicating the need for a corrective disclosure as a prerequisite to establishing loss causation.²⁷

23. See *Dura Pharms., Inc. v. Broudo*, 544 U.S. 336, 347 (2005).

24. See *id.*

25. See *id.* at 342.

26. *Id.* at 343.

27. See, e.g., *Glaser v. Enzo Biochem, Inc.*, 464 F.3d 474, 479 (4th Cir. 2006) ("It is only after the fraudulent conduct is disclosed to the investing public, followed by a drop in the value of the stock, that the hypothetical investor has suffered a 'loss' that is actionable after the Supreme Court's decision in *Dura*.").

Some commentators, plaintiffs' damage experts, and courts have argued that despite this language in *Dura*, in-and-out traders—investors who purchase and sell after the misrepresentation but *prior* to any “corrective disclosure” or the “truth” of the earlier misrepresentation becoming known—should still be able to recover damages in some circumstances.²⁸ The basis for their conclusion is often what is called the “market forces operating on the fraud” theory.²⁹ They believe that in-and-out traders can prove loss causation in certain circumstances.

Consider the following situation. Suppose a widget manufacturer fraudulently states that it has spare capacity to build additional widgets so as to meet the market's demand for widgets in the event that demand for widgets increases. The stock price of the manufacturer increases, say from \$80 to \$100, as the market places a certain positive value on having spare capacity for producing widgets. Immediately after the fraudulent statement, an investor purchases shares in the widget manufacturer at \$100. Subsequent to the purchase, the European Union imposes a tariff on widgets which substantially reduces the market's demand for widgets and thereby decreases the value of having spare capacity. As a result, the value of the investor's shares drops from \$100 to \$90 (in other words, the value of having spare capacity drops from \$20 to \$10). After the imposition of the tariff, the investor sells her shares. At no time does the market learn that the widget manufacturer's statement about having spare capacity is false. Did the fraudulent statement cause economic losses to the investor? More specifically, can the investor recover the amount of the disinflation—the difference between inflation at the time of purchase and inflation at the time of sale—which, in this example, is \$10 (\$20–\$10)?

Employing the “market forces operating on the fraud” theory, some commentators would argue that this investor did suffer recoverable damages. The investor had to pay an inflated price for the shares initially as a result of the combined effect of the false statement concerning spare capacity and the market's value on having spare capacity at the time of purchase, and had to sell the shares at a less inflated price as a result of the European Union's tariff lowering the market's value on having spare capacity at the time of sale.³⁰

28. See, e.g., Madge S. Thorsen, Richard A. Kaplan & Scott Hakala, *Recovering the Economics of Loss Causation*, 6 J. Bus. & Sec. L. 93, 105–06 (2006) (finding that the theory is “rooted in thirty-year old legal precedent [and] sound economic theory” but recognizing that “it is controversial after *Dura*”). The several district courts that have considered whether in-and-out traders can show loss causation have been divided on the issue. Compare *In re Bally Total Fitness Sec. Litig.*, No. 04C3530, 2005 WL 627960, at *5–6 (N.D. Ill. Mar. 15, 2005) (refusing to appoint as lead plaintiff an in-and-out trader who would need “to use considerable resources to establish” loss causation); *Arduini/Messini P'ship v. Nat. Med. Fin. Servs. Corp.*, 74 F. Supp. 2d 353, 360–61 (S.D.N.Y. 1999) (holding that in-and-out traders cannot establish loss causation), with *Montoya v. Mamma.com Inc.*, No. 05 Civ. 2313(HB), 2005 WL 1278097, at *2–3 (S.D.N.Y. May 31, 2005) (appointing a group that included in-and-out traders as lead plaintiff); *In re Bearingpoint, Inc. Sec. Litig.*, 232 F.R.D. 534, 544 (E.D. Va. 2006) (“Moreover, it is also conceivable that the inflationary effect of a misrepresentation might well diminish over time, even without a corrective disclosure, and thus in-and-out traders in this circumstance would be able to prove loss causation.”).

29. See, e.g., *Wool v. Tandem Computers Inc.*, 818 F.2d 1433, 1436–38 (9th Cir. 1986).

30. See Thorsen, Kaplan & Hakala, *supra* note 28, at 105–06.

Several observations based on *Dura* in assessing this argument are in order. First, the “market forces operating on the fraud” theory ignores the language in *Dura* about the need for the truth concerning the misrepresentation to become known in order for there to be loss causation. Under the theory, there are recoverable damages even if the market never learns (as in the example), directly or indirectly, of the actionable misconduct that forms the basis for Rule 10b-5 liability. Second, the theory severely limits the language in *Dura* about how there is no loss causation in a situation in which an investor sells his or her shares after purchase but before disclosure of the truth. If one accepts the “market forces operating on the fraud” theory, then that language in *Dura* must be confined to the highly unusual situation of instantaneous purchases and sales. If any time elapses between the purchase and sale then, according to the “market forces operating on the fraud” theory, recoverable damages might well exist. Third, such an approach ignores the discussion in *Dura* about how price declines from market and industry changes do not give rise to recoverable damages. According to the “market forces operating on the fraud” theory, market and industry changes, such as a change in the value placed by the market on spare capacity, can quite readily give rise to recoverable damages even in the absence of a corrective disclosure concerning the actionable misconduct.

Putting *Dura* aside, what about the economics of the situation described in the hypothetical? Has not such an investor suffered a loss, in an economic sense, from the fraudulent statement? The answer turns on whether one looks at the situation *ex post* or *ex ante*. *Ex ante* the investor is as likely to be the beneficiary of changes in the market’s valuation placed on spare capacity as it is that the investor will incur losses as a result of a change. In the hypothetical, the investor would have gained if the market placed a greater value on having spare capacity (for whatever reason) between the time of purchase and sale. Indeed, an investor might have purchased the stock betting that this would happen. It is unclear why the securities laws should provide a put option for investors (i.e., bailing investors out when their bets turn out poorly) who speculate on changes in general market conditions when, as in the hypothetical, there has not even been a corrective disclosure to establish the necessary link between economic loss and the actionable misconduct.

2. WHAT CONSTITUTES A “CORRECTIVE DISCLOSURE”?

Consider another hypothetical. A company misstates its financial statements and subsequently issues a downward revision of its earnings projection. Many months after the dissemination of the lowered earnings projection the company discloses the need to restate its financials. When did a “corrective disclosure” occur? Did the “truth” about the financial misstatements become “known” at the time of the downward earnings projection or at the time of the disclosure of the need to restate? To raise the stakes, further suppose that there was a statistically significant negative abnormal stock return associated with the downward earnings projection but there was none associated with the disclosure of the need to restate the financials. Indeed, this hypothetical is not so different from the fact

situation in *Dura* itself in which the class period ended on the day Dura Pharmaceuticals released lower than forecasted revenues and lower earnings per share estimates—a day on which Dura's stock price fell approximately 47%.³¹ In contrast, Dura Pharmaceuticals' price moved only modestly on the day that the FDA denied approval of the asthmatic spray device.³²

The U.S. Court of Appeals for the Fifth Circuit in *Greenberg v. Crossroads Systems, Inc.*³³ addressed this issue most directly. The Fifth Circuit held that there was no loss causation in such a situation given that the earnings projection did “not report any concern that [the company's earlier earnings statements] may be incorrect.”³⁴ But what about other circuits which have not squarely addressed when downward earnings projections can constitute the moment at which the “truth” about the earlier financial misstatements became, at least partially, revealed? What is the proper application of the loss causation requirement and *Dura* to this issue?

The issue of when negative stock price reactions to downward earnings projections can form the basis for establishing loss causation is often quite important both in its own right as well as for raising the general issue of whether a disclosure constitutes a “corrective disclosure” with respect to earlier misstatements when the disclosure does not directly indicate that the earlier statements were in fact false. One common claim is that a disclosure should be deemed a “corrective disclosure” when that disclosure reveals the “true financial condition” of the company that was being concealed by the earlier misstatement.³⁵ According to this approach, the “fact that no wrongdoing or error has been identified is unimportant . . . the company's true performance [] has entered the market and the market will react to that.”³⁶

The “true financial condition” theory, like the “market forces operating on the fraud” theory, is problematic. Any negative firm news, such as a downward earnings projection, can contain important information as to the true value of the firm and in that sense a downward-adjusted earnings projection can reveal the “true financial condition” of the firm. However, without a concrete reason to link the negative stock market reaction associated with the earnings projection (or whatever the negative news happens to be) to the removal of the inflation in the stock price caused by the actionable misconduct, such as a misstatement of the financials, loss causation is lacking. In the downward-adjusted earnings projection hypothetical, for example, there is the possibility that if the timing of the intent to restate and the timing of the downward-adjusted earnings projection had been switched, we would have observed exactly the same stock price reactions (significant negative stock market reaction to the earnings projection and none to the intent to restate). This would suggest that the market's reaction to the earnings

31. See Respondents' Brief at 1a, *Dura Pharms., Inc. v. Broudo*, 544 U.S. 336 (2005) (No. 03-932).

32. See *id.*

33. 364 F.3d 657 (5th Cir. 2004).

34. *Id.* at 668.

35. See Thorsen, Kaplan & Hakala, *supra* note 28, at 102–03.

36. See *id.*

projection was negative not because of the removal of inflation caused by the misrepresentation, but because of the implications of the earnings projection for the firm's future cash flows irrespective of the earlier misrepresentation.

It is worth emphasizing that if the downward-adjusted earnings projection had in fact indicated a concern with the veracity of the earlier stated financials, then there would have been a concrete reason to connect the negative market reaction associated with the downward-adjusted earnings projection to the removal of inflation caused by the misstated financials. Alternatively, if market analysts had called into question the earlier financials as a result of the earnings projection, then there likewise would have been a concrete reason to connect the negative stock market reaction to the removal of inflation caused by the misstated financials.³⁷ Without the requirement of establishing such a concrete connection, the "true financial condition" theory removes much of the disciplining effect of the loss causation requirement. One could merely label the firm disclosure associated with the largest negative abnormal stock return reaction as the "corrective disclosure," as such disclosure reveals the "true financial condition" of the company, and thereby generate the largest possible securities damage estimates.³⁸ It is interesting to note that the "market forces operating on the fraud" theory ensures that negative market changes are ready candidates for establishing loss causation, while the "true financial condition" theory ensures that disclosures of negative firm news are likewise ready candidates.

The "true financial condition" theory sometimes arises in the context of the Second Circuit's "zone of risk" test for loss causation. In *Lentell v. Merrill Lynch & Co. Inc.*, the Second Circuit explained that the loss causation question is whether "the loss was within the zone of risk concealed by the misrepresentations and omissions, . . ."³⁹ If one characterizes the "zone of risk" that was concealed by a misrepresentation or omission, say a misstatement of the firm's financials, as the risk of investing in the company, then losses resulting from almost any subsequent negative news about the firm, such as a downward-adjusted earnings projection, can be said to be "caused" by the misrepresentation or omission under the "zone of risk" test. This characterization of the "zone of risk" is in reality just another version of the "true financial condition" theory of loss causation and therefore likewise also effectively vitiates the loss causation requirement.

A proper interpretation of the Second Circuit's "zone of risk" test for loss causation, consistent with *Dura*, is to require that there be a corrective disclosure in the sense that new information reaches the market that unveils earlier actionable

37. In *In re Daou Systems, Inc. Securities Litigation*, 411 F.3d 1006, 1025–26 (9th Cir. 2005), cert. denied sub nom. *Daou Systems, Inc. v. Sparling*, 546 U.S. 1172 (2006), an analyst questioned the veracity of earlier statements by a firm, including its earlier financials, based on a quarterly earnings report that did not meet expectations.

38. As the district court explained in *In re Motorola Securities Litigation*, --- F. Supp. 2d ---, No. 03 C 287, 2007 WL 487738, at *34 (N.D. Ill. Feb. 8, 2007), the standard for determining when a disclosure constitutes a corrective disclosure "cannot be so lax that every announcement of negative news becomes a potential 'corrective disclosure.'"

39. 396 F.3d 161, 173 (2d Cir.) (emphasis in original), cert. denied, 546 U.S. 935 (2005).

misconduct. In the absence of such a corrective disclosure, the negative firm news, and the associated losses, should not be considered within the “zone of risk” concealed by the actionable misconduct. The reason for this is simple. Without imposing a requirement that there be a corrective disclosure in defining the “zone of risk,” one runs the risk that the loss causation requirement would have been deemed satisfied even if there would have been the same negative price market reaction to the negative news without the conduct that ran afoul of Rule 10b-5. And it is the earlier misconduct, it must be remembered, that forms the basis for liability in the first place.

3. POST-CORRECTIVE DISCLOSURE STOCK PRICE MOVEMENTS

Class membership in a securities class action suit often covers purchasers of stock between the date of the alleged misrepresentation (or the date of the first alleged misrepresentation) and the date of the “corrective disclosure” on which the market learns the truth about the misrepresentation (or the earliest date by which the full truth about the fraud is revealed).⁴⁰ Operationally, the “corrective disclosure” date identified by plaintiffs’ counsel is often a date on which there is a large stock drop purportedly because of the market learning the truth about the earlier fraud.⁴¹

An important issue that often arises in estimating securities damages concerns stock price movements in the period immediately following the corrective disclosure date identified by the plaintiffs. In a number of circumstances, the stock price of the firm recovers, at least partially, in the immediate post-corrective disclosure period.⁴² The question post-corrective disclosure stock price movements raise is what impact, if any, do these movements have on damages per share calculations in light of the Supreme Court’s decision in *Dura*? It is important to emphasize that this issue is analytically distinct from the “cap” on damages contained in section 21D of the Securities Exchange Act of 1934, which limits damages to the average trading price of the security in the 90-day period following the corrective disclosure.⁴³ The issue here is not what the applicable “cap” on damages is, but rather what are in fact the damages.

If the stock price reaction in the days, weeks, and months following a corrective disclosure is a result of the market inferring additional information about the implications of a misrepresentation for the firm’s valuation, then these stock price movements occurring after the corrective disclosure date identified by the plaintiffs should analytically be additional corrective disclosures. That is, the full truth

40. See, e.g., Consolidated Amended Securities Class Action Complaint at 2, *In re Royal Ahold N.V. Sec. & ERISA Litig.*, Civil No. 1:03-MD-01539 (D. Md. Feb. 18, 2004); Amended Class Action Complaint at 23, *Ohio Pub. Employees Ret. Sys. v. Freddie Mac*, Civil No. C2-03-711 (S.D. Ohio Jan. 15, 2004).

41. See, e.g., *id.*

42. See, e.g., *id.* See also *infra* Figure 3 for an illustration of Ahold share prices.

43. See Section 21D of the Securities Exchange Act of 1934, ch. 404, § 21D, 48 Stat. 881 (codified as amended at 15 U.S.C. § 78u-4(e) (2000)), as added by PSLRA, *supra* note 3, § 101(b), 109 Stat. at 748–49.

concerning the misrepresentation was revealed to the market on a series of dates. This can have important implications for securities damages.

Suppose, for instance, the market believes that an accounting restatement is indicative of deeper, as of yet undisclosed, problems at a firm. Then the market's reaction to a firm's restatement of its financials will reflect the expected negative effects of those undisclosed problems (perhaps, for instance, expected further accounting restatements) in addition to any negative implications for firm value of the initially misrepresented numbers. If no such problems are disclosed, then as time passes the market might view those hidden problems as less and less likely, resulting in positive stock price changes in the period following the disclosure of the financial restatement. In other words, the non-disclosure of additional problems itself can constitute new information to the market (no news is good news) that should be considered in evaluating the total harm caused by the initially misrepresented financials. Since nondisclosure of further bad news can itself constitute important positive information about the implications of misstated financials on firm value, the dissemination to the market of the full implications of the misrepresentation for firm value does not necessarily occur solely on the date of the disclosure of the true financials.

On a similar note, the disclosure of the misrepresentation can be partial. For example, suppose a firm simply announces that it will restate its prior years' financials without quantifying the extent of the restatement. Often a firm's share price falls, in many cases quite sharply, merely in response to the announcement of a restatement. Typically, the class action plaintiffs end the class period on the day of the announcement of the intent to restate. That is, they argue that the share price on the day of the announcement reflects the "fair value" of the stock and should be used in calculating damages. However, in this example, the restatement announcement, although "corrective," is by no means a full disclosure. In the subsequent weeks and months the firm may provide further details about the extent of the restatement and full disclosure occurs only after the firm finalizes its restatement. Of course, whether the stock price reaction is negative or positive in response to the additional disclosures depends on the market's prior expectation of the probability and type of likely disclosures by the firm.

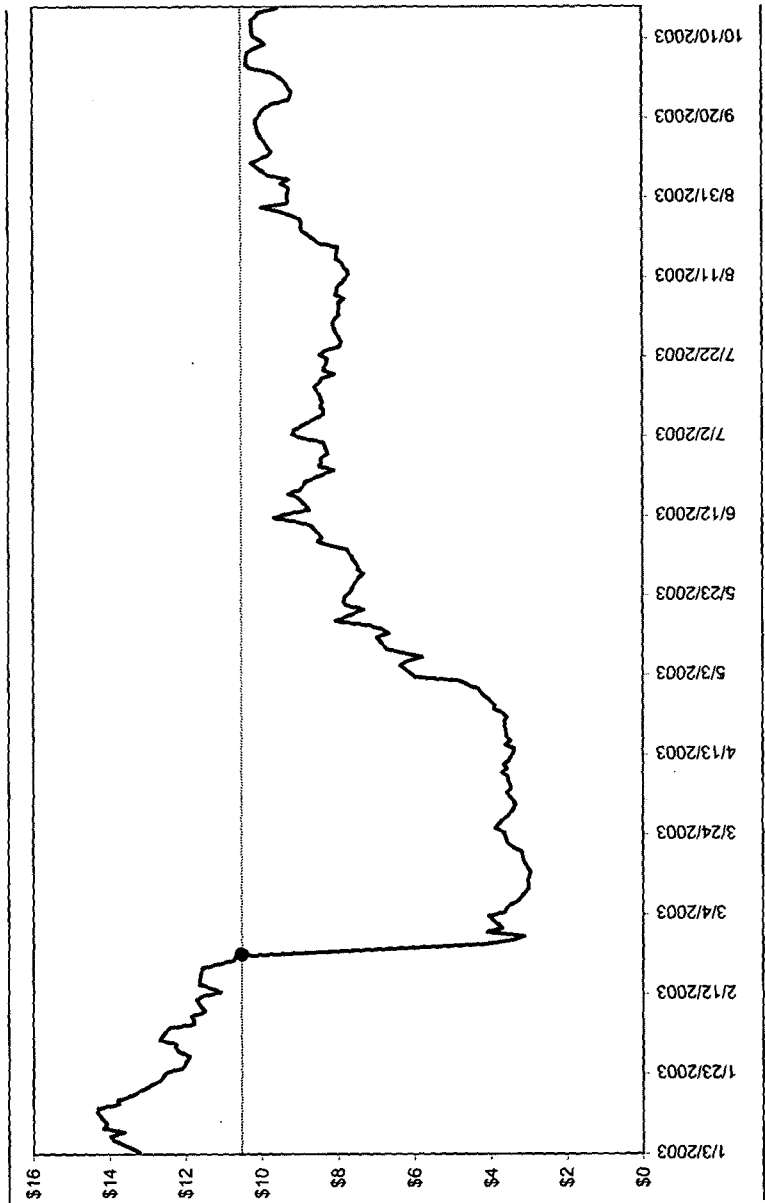
In this context, the Ahold Securities litigation is illustrative. On February 24, 2003, Ahold announced that it would restate its financials for the period 2000–2002. In response to that news, Ahold share prices⁴⁴ fell by 61 percent—dropping from \$10.69, the previous day's closing price, to \$4.16 on the day of the announcement.⁴⁵ In the ensuing Ahold securities litigation, the plaintiffs filed a complaint with the class period ending on February 24, 2003—the day of the restatement announcement.⁴⁶

44. Ahold is traded as an ADR in the U.S. equity market.

45. We believe that the large price impact reflects, in part, the market's "overreaction" to news about financial restatements in the post-Enron environment.

46. See Consolidated Amended Securities Class Action Complaint at 2, *In re Royal Ahold N.V. Sec. & ERISA Litig.*, Civil No. 1:03-MD-01539 (D. Md. Feb. 18, 2004).

Figure 3
Share Prices of Ahold: January through October 2003



However, as is evident from Figure 3, Ahold share prices continued to rebound as the company provided more news about the extent of the restatement in the subsequent months: on August 8, 2003, it announced that the net income restatement amount for the years 1998 through 2002 would be \$880 million; on July 1, it further revised the restatement estimate to \$1.2 billion; finally, on October 17, 2003, the company filed the restated financials with the U.S. Securities and Exchange Commission ("SEC") on a Form 20-F.⁴⁷ On that day, Ahold shares closed at \$9.56, only 11% or \$1.13 lower than the price prior to the first restatement announcement.⁴⁸ Here the critical question is what is the impact of the curative disclosures? From the plaintiffs' point of view the impact is \$6.53, which is the 61% drop on February 24, 2003. However, if one recognizes that the time frame of the corrective disclosures spans the entire period between February 24, 2003 through October 17, 2003, and that full disclosure did not take place until the latter date, then the corrective disclosure impact⁴⁹ is only \$1.13, the difference between the price on February 21, 2003 (the day before the first disclosure) and on October 17, 2003. Needless to say, the difference in the quantification of the impact of the curative disclosures has nontrivial implications for class-wide damages.

IV. ALLOCATION OF INFLATION TO DIFFERENT SHARES

An important distinction to bear in mind in allocating the artificial inflation in stock price to shares purchased at different points in time within the class period is the difference between the class period and the damage period. This is a distinction that is frequently overlooked despite its often important implications for the measure of damages. The distinction is best conveyed through the use of an example.

Suppose that a pharmaceutical company called Dura II truthfully announces that it expects that the FDA will soon grant approval to its new asthmatic spray device. Dura II learns several years later, however, that the FDA, after conducting an extensive examination of the device, is in fact unlikely to approve. When the firm learns of that fact it withholds the information but months later does announce the FDA's actual denial of the asthmatic spray device. Upon the announcement of the denial, Dura II's share price drops substantially. Plaintiffs' counsel, in such a situation, would typically extend the class period from the time of the negative announcement back to the day on which the firm had announced the prospects of likely approval. But, in the absence of a crystal ball, the firm could not have known on that day what it later learned. So despite the losses, perhaps considerable, for those shareholders who purchased upon the firm's announcement of likely approval, damages should exist only for those shareholders who purchased in the time period between when the firm had a legal duty to disclose

47. See *id.* at 113–57. The Ahold ADR price data used in Figure 3 is from Bloomberg LP.

48. See *id.*

49. Here, in the interest of simplicity, we are discussing the "raw" price difference without accounting for market or industry factors.

the FDA's likely denial (and hence arguably engaged in actionable misconduct because it did not promptly disclose) and the announcement of the denial.

Drawing a distinction between the class period and the damage period is faithful to *Dura's* emphasis on focusing on whether actionable misconduct, such as a misrepresentation or a fraudulent nondisclosure, caused economic harm to shareholders. In the pharmaceutical company hypothetical, the economic loss suffered by shareholders who purchased upon the initial positive announcement was not caused by the actionable misconduct, which is the fraudulent nondisclosure of the FDA's likely denial. The actionable misconduct therefore cannot be said to have caused the loss suffered by shareholders who purchased upon the initial positive announcement which, after all, occurred earlier in time. Put slightly differently, there was no inflation in the pharmaceutical's stock price at the time of the positive announcement as the firm at that point had not engaged in fraudulent conduct that would have given rise to Rule 10b-5 liability. To allow the investors who purchased at that point to recover their economic losses would "effectively convert Rule 10b-5 into a scheme of investor's insurance."⁵⁰

Another important aspect of allocating the inflation, as proxied by the market's reaction to the corrective disclosure, to shares purchased at different times is the issue of apportionment of the harm resulting from multiple misrepresentations. Suppose that there is a substantial stock price drop in response to a firm announcing it will restate its financials for the prior years. Assume also the price drop can be attributed to the market removing the inflation in stock price because of a series of misrepresentations (i.e., prior years' financials) that had previously occurred. It is analytically obvious that one cannot use the entire price drop on the announcement day to measure inflation in stock price throughout the damage period because the price drop is the cumulative effect of the disclosure of a series of prior misrepresentations. To do so would result in a gross overestimation of damages. The critical challenge then becomes apportioning the cumulative inflation (as represented by the stock price drop in this example) to shares purchased in different periods. Indeed, this problem is sufficiently serious that it suggests, in some circumstances, that damages experts should not use the stock price drop in reaction to a restatement announcement covering multiple years to approximate the price inflation during the damage period, but should "forward-cast" when feasible. We revisit this issue in greater detail in Part VI.

V. COLLATERAL DAMAGE

Dividing misrepresentations, such as accounting misstatements, into two categories is helpful in thinking about which types of representations can legally give rise to recoverable damages. In the first category are misstatements that have direct implications for the current and future cash flows of a firm or the rate at which

50. *Dura Pharms., Inc. v. Broudo*, 544 U.S. 336, 345 (2005) (internal quotation marks omitted) (quoting with approval *Basic Inc. v. Levinson*, 485 U.S. 224, 252 (1988) (White, J., concurring) (internal quotation marks and citation omitted)).

those cash flows will be discounted. For instance, if a firm overstates its cash-flow generating assets on its balance sheet, that might artificially inflate expectations about the *future* cash flows of the business. Given that share prices, in an efficient market, are the discounted cash flows of the firm,⁵¹ that overstatement would inflate the price of the stock all else being equal. There is, however, a second category of misstatements: those that do not have any bearing on the future cash flows of the firm or the discount rate that should apply to those cash flows when calculating the cash flows' present value. One possible example of such a misstatement might be an accounting statement by a firm that falsely states that the firm has \$100 more in cash than it really does while falsely understating, in the same statement, the firm's corporate holdings of U.S. treasury bonds by an equivalent amount, \$100.

There are three different doctrinal categories under which to analyze the second type of misstatement: loss causation, reliance, and materiality. The reasoning, whatever doctrinal category is employed, consistently points to a lack of recoverable damages. Consider, first, whether there is loss causation. Section 21D of the Securities Exchange Act of 1934 requires that the "act or omission of the defendant alleged to violate [section 10(b)] caused the loss for which the plaintiff seeks to recover damages."⁵² This provision clearly indicates that the actionable Rule 10b-5 misconduct, i.e., the misstatement of corporate holdings, must cause the economic loss alleged by plaintiffs. Or as the U.S. Court of Appeals for the Seventh Circuit put it, "[t]o plead loss causation, the plaintiff must allege that it was the very facts about which the defendant lied which caused its injuries."⁵³ Given the fact that the overstatement of cash reserves exactly equals the understatement of U.S. treasury bonds (a highly liquid asset), it is difficult to argue that the misstatement or the revelation of the truth had any implications for the future cash flows of the firm or the applicable discount rate.

We can also analyze the issue, not in loss causation terms, but in terms of whether one can use the fraud-on-the-market theory to establish "reliance" (another necessary element for a Rule 10b-5 cause of action) on the misstatement. That was the approach adopted by the U.S. Court of Appeals for the Fifth Circuit. In *Greenberg v Crossroads Systems, Inc.*, the Fifth Circuit explained that "plaintiffs cannot trigger the presumption of reliance by simply offering evidence of any decrease in price following the release of negative information. Such evidence does not raise an inference that the stock's price was actually affected by an earlier release of positive information."⁵⁴ The question in the cash reserve example is whether there is any reason to believe that the misstatement constituted "positive information" that increased the firm's stock price above what it otherwise would have been if the correct holdings had been provided to the market. To posit such

51. See Maurice E. Stucke, *Behavioral Economists at the Gate: Antitrust in the Twenty-First Century*, 38 *Loy. U. Chi. L.J.* 513, 534 (2007).

52. See Section 21D of the Securities Exchange Act of 1934, ch. 404, § 21D, 48 Stat. 881 (codified as amended at 15 U.S.C. § 78u-4(b)(4) (2000)), as added by PSLRA, *supra* note 3, § 101(b), 109 Stat. at 747.

53. *Caremark, Inc. v. Coram Healthcare Corp.*, 113 F.3d 645, 648 (7th Cir. 1997).

54. 364 F.3d 657, 665 (5th Cir. 2004).

a reason one would have to explain, as was the case when considering loss causation, how knowing the truth would have affected the market's expectation of the firm's future cash flows or the appropriate discount rate.

Finally, the same conclusion can be reached using instead the language of "materiality" (yet another necessary element for a Rule 10b-5 cause of action). Some circuits, such as the U.S. Court of Appeals for the Third Circuit in *Oran v. Stafford*,⁵⁵ have taken the position that in the context of an efficient market, if a misstatement does not artificially inflate the price of a stock, then the statement is not "material." Again, in the absence of a reason to believe that the misstatement impacted the market's expectations of the firm's cash flows or the applicable discount rate, the misstatement is necessarily immaterial as it would not have affected the stock price as an initial matter.

But suppose that the stock price dropped in reaction to a corrective disclosure that a firm had been misstating its holdings in the past. And further suppose that, using an event study, one concludes that the association of the negative stock reaction with the disclosure announcement is statistically significant. Does the mere fact of a price reaction to a disclosure announcement indicate that the misstatement (in the example, the misstatement concerning the corporate holdings) somehow affected expectations about cash flows and discount rates and is therefore in fact in the first category of statements which can give rise to recoverable damages? Such a conclusion would be premature.

It is possible to account for a negative price reaction associated with the corrective disclosure without assuming that the misstatement artificially inflated the stock price. The corrective disclosure can create negative stock price reactions because of what we will label "collateral damage." The presence of "collateral damage" is entirely consistent with the misstatement not inflating the price of the stock at the time the misstatement was made. By way of illustration we will consider two types of "collateral damage," both of which might well occur as a result of the disclosure of an accounting restatement necessitated by the misstatement of corporate holdings: reassessment of the quality of a firm's management or internal controls; and possible disruptive legal action.

a. Reassessment of a Firm's Management or Internal Controls

An example of collateral damage would be investors revaluing a firm not as a result of the information contained in the corrective disclosure contradicting the (false) representation made earlier, but rather as a result of a reassessment (perhaps only temporary) of how well the firm is run. Upon the announcement of the need for an accounting restatement, investors might infer that the quality of the firm's management and internal controls are lower than they had previously believed and revalue the firm downward accordingly. For example, investors might infer that the firm's internal controls are less rigorous than they had previously believed given the fact that false statements somehow made it into the firm's ac-

55. 226 F.3d 275, 282 (3d Cir. 2000).

counting statements. Such an inference could result, for example, in a reduction in firm value if investors placed some importance on the quality of the firm's internal controls in generating future cash flows.

However, this explanation for the stock price decline associated with a corrective disclosure is consistent with the original misstatement not artificially increasing the stock price (and hence the misstatement not causing economic losses *à la Caremark* or not creating reliance by inflating stock prices *à la Crossroads* or not being material by inflating prices *à la Oran*). If the original fraudulent accounting statement only contained information, albeit false, about corporate holdings then there was no statement, let alone a misstatement, about the quality of the firm's management or its internal controls. And it is only the actionable fraudulent statement that gives rise to potential Rule 10b-5 liability, i.e., the misstatement of corporate holdings, and only if that statement caused the stock price to be artificially inflated. There is no general duty to disclose, for instance, that the management of a firm or the quality of the firm's internal controls are not the same as those expected by the market. The U.S. Supreme Court succinctly captured this point when it flatly stated, "Silence, absent a duty to disclose, is not misleading under Rule 10b-5."⁵⁶

The critical point is that the economic losses suffered by investors must be traceable to whatever misconduct is actionable under the federal securities laws, and not merely to the dissemination of information unrelated to the fraud. This later category includes information relating to conduct that might be actionable under other laws, such as state corporate law. The Court in *Broudo v. Dura Pharmaceuticals, Inc.* explained that loss causation only exists if a "plaintiff prove[s] that the defendant's *misrepresentation (or other fraudulent conduct)* proximately caused the plaintiff's economic loss."⁵⁷ Indeed, the U.S. Court of Appeals for the Seventh Circuit, going one step beyond that, recently emphasized that plaintiffs must show that each actionable misrepresentation individually has a "causal connection" with plaintiffs' losses.⁵⁸ As has been long established, it is simply not actionable misconduct under the federal securities laws for a firm to be poorly run nor does the fact that a firm's internal controls are weaker than those expected by the market give rise to a cause of action. The U.S. Supreme Court made this clear in *Santa Fe Industries, Inc. v. Green* when it explained that "Congress by 10(b) did not seek to regulate transactions which constitute no more than internal corporate mismanagement."⁵⁹ On a similar note, the U.S. Supreme Court in *Chiarella v. United States*⁶⁰ reversed a conviction under Rule 10b-5 in a case in which the jury instructions tracked the text of Rule 10b-5 but did not mention that nondisclosure is only actionable when there is a duty to disclose.

56. *Basic Inc. v. Levinson*, 485 U.S. 224, 239 n.17 (1988).

57. *Dura Pharms., Inc. v. Broudo*, 544 U.S. 336, 346 (2005) (emphasis added).

58. *Tricontinental Indus., Ltd. v. PricewaterhouseCoopers, LLP*, 475 F.3d 824, 843 (7th Cir. 2007) (internal quotation marks omitted), *cert. denied*, ---S. Ct.---, No. 06-1670, 2007 WL 2819761 (U.S. Oct. 1, 2007).

59. 430 U.S. 462, 479 (1977) (internal quotation marks omitted) (quoting with approval *Superintendent of Ins. v. Bankers Life & Cas. Co.*, 404 U.S. 6, 12 (1971)).

60. 445 U.S. 222, 236 (1980).

Nor is it obvious that such information about a firm's managerial quality or its internal controls would have reached the market earlier but for the misrepresentation. In other words, in the "but for" world, the hypothetical world in which the corporate holdings misstatement had not been made, it is not at all clear (or perhaps even plausible) that the firm would have disclosed to the market that its internal controls or the quality of its management was lower than the market's expectation. As a result, one could not plausibly claim that price declines resulting from investors' reassessment of managerial quality or the firm's internal controls were caused by the market learning the truth about the content of the misrepresentation concerning corporate holdings (returning to the earlier example) which is the purported basis for Rule 10b-5 liability in the first place.

In this context of "collateral damage," the facts surrounding the Freddie Mac securities litigation provide useful insights. The class action lawsuit against Freddie Mac followed the company's announcement in January 2003 that it would restate its earnings for four prior years. However, unlike the vast majority of Rule 10b-5 matters, here Freddie Mac had announced it would restate its earnings upward! Subsequently, on June 9, 2003, it announced that its top three officers would be replaced. On that day, Freddie Mac's share prices fell by 16%—from a previous close of \$59.87 to \$50.26—a \$9.61 drop. However, over the subsequent weeks Freddie Mac continued to provide further information about its restatement, announcing, for example, on June 25 that the upward restatement could be as high as \$4.5 billion. On November 21, 2003, Freddie Mac finally filed its restated financials with the SEC, and not unexpectedly, the share prices went up in response to the news. The share price movement for Freddie Mac over this relevant period is depicted in Figure 4. In the class action complaint, the plaintiffs chose to end the class period on June 9, 2003, the day of the announcement of the top officers being replaced.⁶¹

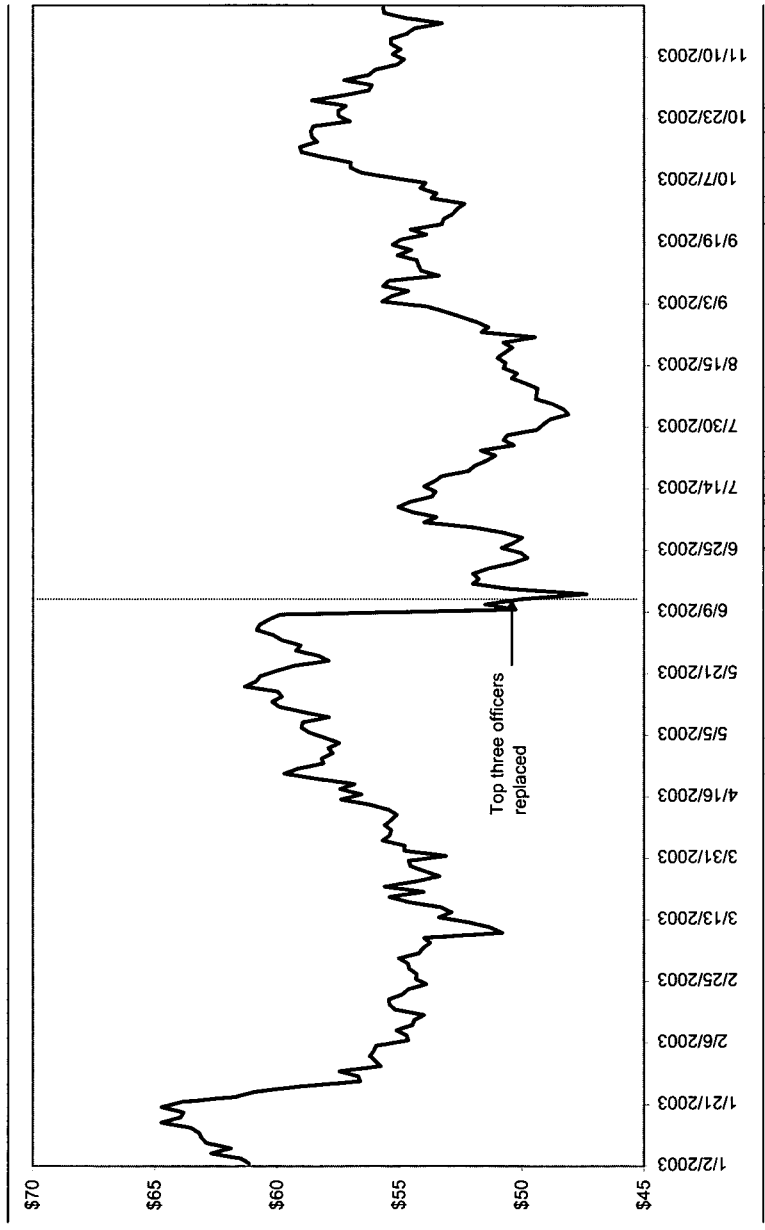
The Freddie Mac securities litigation exemplifies a case in which collateral damages associated with the replacement of management had no bearing on the misstatement of the company's prior years' financial results. Likewise, there was not a direct link between the misstatement and an adverse impact on share prices. It is unclear how revision of prior years' earnings *upward* could have harmed the firm's value and its then-current share prices. Moreover, while the replacement of the top officers was associated with a price drop, it is equally unclear why that drop should lead to any recoverable damages based on Rule 10b-5 claims.

b. Disruptive Legal Action

Revisiting the corporate holdings misstatement example, suppose that the stock price decline was due to investors predicting that the company was likely to be subject to disruptive lawsuits, state attorneys general actions, and SEC en-

61. See Amended Class Action Complaint at 23, 157, *Ohio Pub. Employees Ret. Sys. v. Freddie Mac*, Civil No. C2-03-711 (S.D. Ohio Jan. 15, 2004). The Freddie Mac stock price data used in Figure 4 is from Bloomberg LP.

Figure 4
Freddie Mac Share Prices: January through November 2003



forcement proceedings as a result of the accounting restatement. In particular, if investors valued the retention of the executives who were responsible for the misstatement, then expected legal action could well have the effect of these executives losing their jobs and thereby hurting the value of the firm. A company's stock price could decline for this reason even if investors placed absolutely no lower value on the firm as a result of the information contained in the accounting restatement. As the Supreme Court explained in *Dura*, price changes "may reflect, not the earlier misrepresentation, but changed economic circumstances, changed investor expectations, new industry-specific or firm-specific facts, conditions or other events. . . ." ⁶² The price decline in this situation would be due to new "firm-specific facts" as opposed to firm revaluation resulting from the market learning the truth about corporate holdings which was the subject of the earlier fraudulent representation.

VI. CONFIRMATORY STATEMENTS AND FORWARD-CASTING ESTIMATES OF DAMAGES

In estimating per-share damages, plaintiffs' experts typically adopt a "back-casting" approach.⁶³ That is, they use the price decline as a result of the curative disclosure to measure the inflation during the class period.⁶⁴ In particular, they begin with the share prices at the end of the class period (which presumably reflect the fair market value of the security) and proceed backward in time to the beginning of the class period in constructing the but-for share price line.⁶⁵ The difference between the actual price and the 'back-casted' but-for price is purported to provide a measure of per-share damages on a given day within the class period.

This 'back-casting' approach can suffer from some problems. As we discussed earlier, market overreaction, post-corrective disclosure price movement, collateral damage, and apportionment issues can render it difficult to estimate with any degree of reliability the inflation during the damage period using the price drop associated with the disclosure.

A potential avenue for avoiding these problems is to use a "forward-casting" approach in creating the but-for price line. In forward-casting, one estimates the inflation in stock price associated with the misrepresentation announcement as opposed to inferring the extent of the inflation from the price decline associated with the curative disclosure. The doctrines of loss causation, reliance, and materiality, after all, all point to the inflation in stock price (and its subsequent removal via a corrective disclosure) as the potential harm to shareholders associated with a misrepresentation.

62. *Dura Pharms., Inc. v. Broudo*, 544 U.S. 336, 343 (2005).

63. See John Finnerty & George Pushner, *An Improved Two-Trader Model for Measuring Damages in Securities Fraud Class Actions*, 8 STAN. J.L. BUS. & FIN. 213, 220 (2003) (discussing the "basic plaintiff-style approach" before critiquing it).

64. See *id.*

65. See *id.*

The application of the forward-casting approach is straightforward when the false information, which the market believes is true, was unanticipated by the market. In such an event, the stock price reaction (net of market, industry and other confounding effects) associated with the initial dissemination of the misrepresentation would represent the inflation in stock price which potentially harms shareholders by artificially inflating the purchase price.

A number of misrepresentations, however, are motivated by the firm's desire to meet market expectations, such as a desire to meet the market's expectations of earnings. These so-called "confirmatory statements" pose some challenging issues in terms of estimating securities damages. As the U.S. Court of Appeals for the Fifth Circuit noted, "[C]onfirmatory information has already been digested by the market and will not cause a change in stock price."⁶⁶ It is still possible, nevertheless, to use a forward-casting approach even in a "confirmatory statement" situation.

Suppose, for instance, that a firm overstates its earnings in order to meet the market's earnings expectations and there is, accordingly, no market reaction to the misrepresentation. In this case, the forward-casting approach would entail estimating what the market reaction would have been had the restated lower earnings been known on the misstated earnings announcement days. This estimation can be undertaken through an event study using the firm's prior earnings announcement days and quantifying the relationship between price response and earnings surprises or changes.⁶⁷ This relationship could then be used to estimate the but-for stock returns in the earnings announcement days using the firm's restated earnings. These but-for returns when substituted for the actual returns on the earnings announcement days would generate the forward-casted but-for price line. The difference between the actual and the but-for price line would be a direct measure of the inflation caused by the overstated earnings. Our experience suggests that, typically, the back-casted and the forward-casted approaches yield substantially different but-for price lines, and hence vastly dissimilar estimates of damages.

VII. CONCLUSION

The Supreme Court's decision in *Dura* raises a host of important issues concerning the contours of the loss causation requirement for Rule 10b-5 actions. These important issues include the proper application of event study analysis, the requirement that there be a corrective disclosure, what constitutes a corrective disclosure, the proper treatment of post-corrective disclosure stock price movements, the allocation of inflation to different shares, the treatment of collateral damage from a corrective disclosure, and the use of forward-casted damage estimates. The proper resolution of these issues plays a critical role in ensuring that the loss causation requirement, a requirement emphasized by the Court's opinion in *Dura*, plays its important role in preventing Rule 10-b5 damages from becoming a costly insurance scheme for investors.

66. *Greenberg v. Crossroad Sys., Inc.*, 364 F.3d 657, 665–66 (5th Cir. 2004).

67. While this estimation can be undertaken using only the 'clean' period (i.e., the period preceding the misstatement) as long as market believed in the stated earnings, there is no reason necessarily to exclude the class period from this estimation.